PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44*bis*)

Applicant's or agent's file reference K12F1514	**FOR FURTHER ACTION**	See item 4 below
International application No. PCT/JP2005/005741	International filing date *(day/month/year)* 28 March 2005 (28.03.2005)	Priority date *(day/month/year)* 29 March 2004 (29.03.2004)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant NAKAMURA, Toshikazu		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 *bis*.1(a).

2. This REPORT consists of a total of 7 sheets, including this cover sheet.

   In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

☒	Box No. I	Basis of the report
☐	Box No. II	Priority
☒	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
☐	Box No. IV	Lack of unity of invention
☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
☐	Box No. VI	Certain documents cited
☐	Box No. VII	Certain defects in the international application
☒	Box No. VIII	Certain observations on the international application

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44*bis*.3(c) and 93*bis*.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44*bis* .2).

	Date of issuance of this report 19 October 2006 (19.10.2006)
The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	Authorized officer Yoshiko Kuwahara e-mail: pt07@wipo.int

Form PCT/IB/373 (January 2004)

PATENT COOPERATION TREATY

TRANSLATION

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

	Date of mailing *(day/month/year)*
Applicant's or agent's file reference K12F1514	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/JP2005/005741	28.03.2005	29.03.2004

International Patent Classification (IPC) or both national classification and IPC

Applicant
NAKAMURA, Toshikazu

1. This opinion contains indications relating to the following items:

☒	Box No. I	Basis of the opinion
☐	Box No. II	Priority
☒	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
☐	Box No. IV	Lack of unity of invention
☒	Box No. V	Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
☐	Box No. VI	Certain documents cited
☐	Box No. VII	Certain defects in the international application
☒	Box No. VIII	Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP Facsimile No.	Authorized officer Telephone No.

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

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Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐ a sequence listing

☐ table(s) related to the sequence listing

b. format of material

☐ in written format

☐ in computer readable form

c. time of filing/furnishing

☐ contained in the international application as filed.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

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Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application

☒ claims Nos. 12-22

because:

☒ the said international application, or the said claims Nos. 12-22 relate to the following subject matter which does not require an international preliminary examination (*specify*):

The inventions of claims 12-22 concern treatment of the human body by therapy.

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. _____ are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. _____ are so inadequately supported by the description that no meaningful opinion could be formed.

☒ no international search report has been established for said claims Nos. 12-22

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form
- ☐ has not been furnished
- ☐ does not comply with the standard

the computer readable form
- ☐ has not been furnished
- ☐ does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.

☐ See Supplemental Box for further details.

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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims		YES
	Claims	1-11, 23-33	NO
Inventive step (IS)	Claims		YES
	Claims	1-11, 23-33	NO
Industrial applicability (IA)	Claims	1-11, 23-33	YES
	Claims		NO

2. Citations and explanations:

(Documents cited in the international search report)
Document 1: WO 2002/083700 A1 (IVAX RESEARCH, INC.) 24 October 2002
Document 2: JP 8-506322 A (Yeda Research & Development Co., Ltd.) 9 July 1996
Document 3: JP 6-506973 A (GLYCOMED INC.) 4 August 1994
Document 4: JP 4-503950 A (GLYCOMED INC.) 16 July 1992
Document 5: JP 63-66192 A (SANOFI) 24 March 1988

(Claims 7, 11, 29, and 33)

Document 1 describes a medicinal composition containing the compound represented by Structure I for the treatment of inflammatory lung disease such as COPD, and the like (Claims 6 and 11).

Document 2 describes a medicinal composition containing the disaccharide represented by Formula (I) (claim 1), and it describes the use of that disaccharide for the treatment of diseases such as inflammatory bowel disease, skin diseases, basal cell carcinoma and melanoma, and the like (Claims 29 and 31).

Documents 1 and 2 do not state that the medicinal compositions have an HGF production promoting effect, and either do not have a hemagglutination effect and lipoprotein releasing action or inhibit those actions, but the application of the HGF production promoting drug of claims 7, 11, 29, and 33 is identical to the applications of the medicinal compositions described in documents 1 and 2, and therefore the inventions of claims 7, 11, 29, and 33 are described in documents 1 and 2.

As a result, based on documents 1 and 2, the inventions of claims 7, 11, 29, and 33 lack novelty and an inventive step.

(Claims 1-4, 6-9, 11, 23-26, 28-31, and 33)

Document 3 describes a medicinal composition containing the hexosaccharide and octosaccharide described in Formula III(a) (CLAIMS 11 and 17; page 7, lower right column, lines 11-15; EXAMPLE 1), and it describes the use of that medicinal composition for the treatment of trauma and diseases such as acute glomerulonephritis and the like (page 11, lower left column, lines 1-21).

As a result, based on the description in document 3, the inventions of claims 1-4, 6-9, 11, 23-26, 28-31, and 33 lack novelty and an inventive step.

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Box No. VIII **Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

In Formulas (II), (III), and (IV) of claims 7 and 29, when *n* equals 0, the compound does not have an α 1,4-glycoside linkage or β 1,4-glycoside linkage between the uronic acid residue and the glucosamine residue.

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of: Box V.

(Claims 1-4, 6-11, 23-26, and 23-33)

Document 4describes a medicinal composition containing the compound represented by Formula (I) (CLAIMS 5, 6, and 10), and it describes the use of that medicinal composition for the treatment of trauma and diseases such as acute glomerulonephritis and the like (page 7, upper left column, line 21 to upper right column, line 16).

As a result, based on document 4, the inventions of claims 1-4, 6-11, 23-26, and 28-33 lack novelty and an inventive step.

(Claims 1-11 and 23-33)

Document 5 describes the compound represented by Formula II, and states that it is an oligosaccharide consisting of at least 14 residues (CLAIMS 3 and 4; column 29, line 15 to column 31, line 3; EXAMPLES). In addition, document 5 describes the use of a medicinal composition containing that oligosaccharide for the treatment of conditions such as trauma and the like (CLAIM 24; column 36, lines 6 to 17).

As a result, based on document 5, the inventions of claims 1-11 and 23-33 lack novelty and an inventive step.